KOLUPAYEVA, D.I.; LAVROVSKIY, K.P.; ROZENTAL', A.L.

Dehydrogenation of mixtures of isopentane with isopentenes on a chromia-alumina catalyst. Neftekhimiia 3 no.6:853-858 N-D '63. (MIRA 17:3)

1. Institut neftekhimicheskogo sinteza AN SSSR im. A.V.Topchiyeva.

L 10701-63 EPR/EWP(j)/EPF(c)/EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/APGC/SSD--
Ps-4/Pc-4/Pr-4/Pn-4--EW/RM/WH/MN
ACCESSION NR: AP3002019 S/0195/63/004/003/0337/0347

85
84

AUTHOR: Brodskiy, A. M.; Lavrovskiy, K. P.; Titov, V. B.

TITLE: Radiation transformation rate of hydrocarbons as a function of temperature

SOURCE: Kinetika i kataliz, v. 4, no. 3, 1963, 337-347

TOPIC TAGS: radiation decomposition, liquid hydrocarbon, radiation-thermal cracking, nuclear reactor, hydrocarbon radiolysis

ABSTRACT: Authors examine the rate of radiation decomposition of liquid hydrocarbons as a function of temperature. Detailed experimental data concerning the radiation-thermal cracking of a mixture of petroleum hydrocarbons - directly distilled gas oil in a nuclear reactor is shown. These data made it possible to determine basic characteristics of a change in the rate and direction of radiolysis of the hydrocarbons with a rise in temperature, which are of a theoretical and practical interest at the present time. "The authors with to thank A. Kh. Eglit for his help in this study." Orig. art. has: 7 equations, 5 figures, and 4 tables.

Card 1/2 Inst. of Petrochemical Synthesis

BRODSKIY, A.M.; LAVROVSKIY, K.P.

On the temperature limit for the effect of radiation on the rate of chemical transformations. Kin. i kat. 4 no.4:652-653 Jl-Ag '63. (MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

L 36732-65 EWG(j)/EWT(l)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EPR/EWP(j)/
T/EWP(t)/EWP(b)/EWA(h)/EWA(l) Pc-4/Pr-4/Ps-4/Peb/Pu-4 DJ/GS/RM

ACCESSION NR: AT5007896 S/0000/64/000/000/0016/0030

AUTHOR: Aleksenko, Yu. N.; Brodskiy, A. M.; Lavrovskiy, K. P.; Khramchenkov, V. A.

TITLE: Investigation of organic heat-transfer agents and moderators based on completely hydrogenated terphenyls

SOURCE: Moscow. Institut atomnoy energii. Issledovaniya po primeneniyu organicheskikh teplonositeley-zamedliteley v energeticheskikh reaktorakh (Research on the use of organic heat-transfer agents and moderators in power reactors). Moscow, Atomizdat, 1964, 16-30

TOPIC TAGS: organic cooled reactor, power reactor, reactor coolant, thermal reactor, radiation polymerization, heat transfer agent, moderator, hydrogenated terphenyl, biphenyl

ABSTRACT: This article presents a method for preparing heat-transfer agents, the results of investigations on their behavior in the process of radiothermal conversions in ampoule tests and in a circulating reactor, as well as the changes in thermophysical and physico-chemical properties of these compounds. The incompletely hydrogenated terphenyls (HTP) were obtained by fractional crystallization of different bottoms at 400 - 420C, from which 6% biphenyl, 8 - 10% orthoterphenyl, 24% metaterphenyl and 24% paraterphenyl were obtained. Investigations of the

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L 36732-65
ACCESSION NR: AT5007896

radiothermal stability of HTP were carried out in three directions: 1) investigations of the thermal stability in the absence of radiation; 2) investigations of radiation stability at different temperatures under conditions of ampoule irradiation; 3) investigations of radiothermal stability under working conditions for a loop experiment on a reactor. These tests were conducted in stainless-steel ampoules in an atmosphere of technical nitrogen and lasted for 200 hrs. Measurements were also made of the content of the high-boiling product, kinematic viscosity of the specimen, and the molecular weight of the high-boiling product. The authors show that radiolysis of HTP at 350 - 380C leads to the formation of gaseous, high-boiling and low-boiling products. In addition, the composition of the products forming during radiolysis at 350 - 370C indicates flow in the latter along with the reactions of condensation, dehydrogenation and cracking. It is also pointed out that there was no formation or precipitation in the form of particles or films of any insoluble products. Orig. art. has: 4 tables and 17 figures.

ASSOCIATION: Institut atomnoy energii, Moscow (Institut of Atomic Energy)

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: NP, OC

NO REF SOV: 002 OTHER: 000

Card 2/2

L 36731-65 EWG(j)/EWT(l)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EPR/EWP(j)/T/EWP(t)/EWP(b)/EWA(h)/EWA(l) Pc-4/Pr-4/Ps-4/Peb/Pu-4 DJ/GS/RM

ACCESSION NR: AT5007897 S/0000/64/000/000/0031/0046

AUTHOR: Brodskiy, A. M.; Lavrovskiy, K. P.; Zvonov, N. V.

TITLE: Investigation of the possibilities of using petroleum gas-oil fractions as heat-transfer agents for nuclear reactors

SOURCE: Moscow. Institut atomnoy energii. Issledovaniya po primeneniyu organicheskikh teplonositeley-zamedliteley v energeticheskikh reaktorakh (research on the use of organic heat-transfer agents and moderators in power reactors). Moscow, Atomizdat, 1964, 31-46

TOPIC TAGS: radiation polymerization, organic cooled reactor, reactor coolant, thermal reactor, gas oil, petroleum refining, heat transfer agent, pyrolysis

ABSTRACT: The basic results of loop investigations and investigations in ampoules of the radiothermal conversions of a gas-oil fraction are presented. The raw material was a specially prepared gas oil from a non-sulfurous petroleum having a naphthene-aromatic base. In the experiments, both the purely thermal and radiothermal resistance of a gas oil were investigated in stainless-steel ampoules in an atmosphere of technical nitrogen. The results of measurements obtained from the pyrolytic tests show that the gas oil is completely stabl at 200 - 250C. At

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L 36731-65
ACCESSION NR: AT5007897

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300 - 370C, destructive processes set in leading to the formation of low-boiling products. At 420C, a very rapid build-up of high-boiling products is detected. It is shown that with an increase in the total radiation dose the hydrogen concentration decreases and the content of heavier hydrocarbons increases during radiolysis. Considerable attention was given to studying the chemical reactions occurring directly in liquid fractions under the influence of radiation from a nuclear reactor at a total dose of 600 Mrad. The formation of light-boiling radiolysis products was studied as a function of the build-up of fractions boiling at up to 150C and from 150 to 200C. The authors conclude with a discussion of the formation of radiation-induced polymers at 300C. It is shown that the examined gas-oil fraction can be used in nuclear reactors up to 330C. "The authors express their appreciation to A. N. Mezentsev, V. B. Titov, and Yu. L. Fish." Orig. art. has: 8 tables and 13 figures.

ASSOCIATION: Institut atomnoy energii, Moscow (Institute of Atomic Energy)

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: NP, FP, OC

NO REF SOV: 005 OTHER: 000

Card 2/2 ks

L 36729-65 EPF(c)/EPF(n)-2/EPR/EWG(j)/EPA(s)-2/EWA(b)/EWT(l)/EWT(m)/ENP(j)/EWG(m)/EWP(b)/T/EWA(l)/EWP(t) Pc-4/Pr-4/Ps-4/Pu-4/Peb RM/DJ/GS

ACCESSION NR: AT5007899 S/0000/64/000/000/0056/0062

AUTHOR: Brodskiy, A. M.; Lavrovskiy, K. P.; Makarov, D. V.; Fish, Yu. L.; Zvonov, N. V.

TITLE: The regeneration of organic heat-transfer agents by hydrogenation

SOURCE: Moscow. Institut atomnoy energii. Issledovaniya po primeneniyu organicheskikh teplonositeley-zamedliteley v energeticheskikh reaktorakh (Research on the use of organic heat-transfer agents and moderators in power reactors). Moscow, Atomizdat, 1964, 56-62

TOPIC TAGS: organic reactor coolant, thermal reactor, power reactor, radiation polymerization, heat transfer agent, coolant regeneration, coolant hydrogenation, catalytic hydrogenation

ABSTRACT: The results of model tests on the use of gas-oil and hydroterphenyl as heat-transfer agents are presented. The regeneration of the heat-transfer agents was carried out under conditions of hydrocracking on an Al-Co-Mo catalyst under a hydrogen pressure of 40 - 60 atm. at a temperature of 300 - 350C in the reactor. The changes in the content of polymers and unsaturated compounds as a function of the dose of absorbed energy were determined during radiolysis of the gas-oil

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L 36729-65

ACCESSION NR: AT5007899

fraction. It is shown that regeneration by hydrogenation enables one to maintain the prescribed amount of polymers and unsaturated compounds in the working heat-transfer agent within wide limits. It is also shown that the unsaturated compounds are completely eliminated during the process of regeneration and that the concentration of the products of radiation polymerization is greatly reduced. The authors conclude that the material balance during the regeneration of hydrogenated terphenyls does not differ from the balance during regeneration of a gas-oil with respect to either hydrogen consumption or the yield of end products. Orig. art. has: 4 tables and 3 figures.

ASSOCIATION: Institut atommoy energii, Moscow (Institute of Atomic Energy)

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: TD,OC,NP

NO REF SOV: 000 OTHER: 000

Card 2/2

TIMKIN, V.N.; LAVROVSKIY, K.P.; BRODSKIY, A.M.; RUMYANTSEV, A.N.

Kinetics of the dimerization of the cyclopentadiene contained in gasoline distillates from the high-temperature pyrolysis of petroleum products. Neftekhimia 4 no.3:435-440 My-Je '64. (MIRA 18:2)

1. Institut neftekhimicheskogo sinteza AN SSSR im. A.V.Topchiyeva.

L 36482-65 EPF(c)/EPR/EWP(j)/EWT(m) Po-4/Pr-4/Ps-4 RPL RM/WW

ACCESSION NR: AP5010561 UR/0204/64/004/005/0691/0699 33 31 B

AUTHOR: Yampol'skiy, Yu. P.; Brodskiy, A. M.; Kalinenko, R. A.; Lavrovskiy, K. P.

TITLE: Transformations of ethylene at high temperatures

SOURCE: Neftekhimiya, v. 4, no. 5, 1964, 691-699

TOPIC TAGS: ethylene, high temperature phenomenon, reaction mechanism, chemical kinetics

Abstract: The kinetics and mechanism of the thermal transformations of ethylene were investigated in a turbulent reactor within the temperature range 800-1100°C at a pressure of 100 mm of mercury, i.e. under conditions at which decomposition reactions begin to predominate, while the polymerization reactions still take place at an appreciable rate. Kinetic curves were obtained for the accumulation of the basic reaction products: hydrogen, methane, acetylene, butadiene-1, 3, benzene, and coke. Ethane, propylene, allene, methylacetylene, isomeric butenes, vinylacetylene and cyclopentadiene, traces of cyclohexene, toluene, and stryene were also detected among the reaction products. Butadiene-1,3 was found according to a second-order reaction from C_2H_4, with an activation energy of 63 ± 5 kcal/mole, and rapidly entered into fruther transformations. The apparent activation energy of coke formation was 38 ± 5 kcal/mole.

The authors express their gratitude to Q. M. Knipovich for the assistance in

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L 36482-65

ACCESSION NR: AP5010561 2

carrying out the experiments, and to N. Ya. Chernyak for the assistance in the identification of vinyl-acetylene and cyclopentadiene by the method of mass-spectroscopy. Orig. art. has: 1 figure, 8 formulas, 5 graphs, 4 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva, AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 12Mar64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 005 OTHER: 012 JPRS

Card 2/2

L 51813-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 WE/RM

ACCESSION NR: AP5017012 UR/0204/64/004/006/0880/0887

AUTHOR: Brodskiy, A.M.; Lavrovskiy, K. P.; Rumyantsev, A. N.; Timkin, V. N.; Fish, Yu. L.

TITLE: Production of higher alpha-olefins by the method of high-speed contact cracking of paraffinic petroleum products

SOURCE: Neftekhimiya, v. 4, no. 6, 1964, 880-887

TOPIC TAGS: petroleum refining, petroleum refinery product, paraffin wax

ABSTRACT: The high-speed contact cracking of soft wax and other paraffinic petroleum products was investigated on semiindustrial and pilot-plant installations. The primary decomposition products were found to be alpha-olefins (pentene-1, hexene-1, heptene-1, octene-1, nonene-1, and decene-1) were isolated by fractional distillation of the alpha-olefin fraction. The olefin content in the fraction of high-speed cracking of soft wax boiling below 150° was 70-75%. The products of high-speed cracking of solid wax and paraffinic crude, boiling within the range 200-350°, contained up to 85% unsaturated compounds, chiefly alpha-olefins. In a study of high-speed cracking of soft wax on the semiindustrial installation of the Moscow Neftegaz Plant, the necessary indices of the process were determined. The high concentration of alpha-olefins in the products of high-

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L 51813-65
ACCESSION NR: AP5017012

speed cracking permit the isolation of narrow fractions containing up to 95% of the individual alpha-olefins by fractional distillation. Orig. art. has: 3 formulas, 1 graph, 6 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petro-Chemical Synthesis AN SSSR)

SUBMITTED: 12Mar64	ENCL: 00	SUB CODE: FP
NR REF SOV: 010	OTHER: 006	JPRS

gah
Card 2/2

22c

L 24212-65 EWT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 DM

ACCESSION NR: AP5001265 S/0089/64/017/006/0439/0448

AUTHOR: Polushkin, K. K.; Yemel'yanov, I. Ya.; Delens, P. A.; Zvonov, N. V.; Aleksenko, Yu. I.; Grozdov, I. I.; Kuznetsov, S. P.; Sirotkin, A. P.; Tokarev, Yu. I.; Lavrovskiy, K. P.; Brodskiy, A. M.; Belov, A. R.; Borisyuk, Ye. V.; Gryazev, V. M.; Tetyukov, V. D.; Popov, D. N.; Koryakin, Yu. I.; Filippov, A. G.; Petrochuk, K. V.; Khoroshavin, V. D.; Savinov, N. P.; Meshcheryakov, M. N.; Pushkarev, V. P.; Suroyegin, V. A.; Gavrilov, P. A.; Podlazov, L. N.; Rogozhkin, I. N.

TITLE: Atomic electric power installation "Arbus" with organic coolant and moderator

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 439-448

TOPIC TAGS: small nuclear reactor, organic coolant, organic moderator, reactor economy, nuclear reactor

ABSTRACT: The paper is a summary of the SSSR # 307 report at the Third Inter-

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L 24212-65

ACCESSION NR: AP5001265

national Conference on Peaceful Uses of Atomic Energy, 1964. It describes an installation of a reactor in which organic liquid serves as the coolant, and as the moderator. The low-power reactors of about 5 Mw are expected to be economical in the remote regions where the usual energy sources are not available. A regeneration system is described for the coolant which removes the products of radiolysis. Orig. art. has: 7 figures

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NR REF SOV: 000 OTHER: 000

Card 2/2

L 34473-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(l) Pc-4/Pr-4/
Pu-4/Peb RPL GG/RM

ACCESSION NR: AP5001990 S/0020/64/159/006/1319/1322

AUTHOR: Brodskiy, A. M., Lavrovskiy, K. P. (Corresponding member AN
Titov, V.B.; Eglit, A. Kh.

TITLE: Radiation-thermal conversion of normal alkanes in liquid phase

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1319-1322

TOPIC TAGS: normal alkane, thermal radiolysis, radiation thermal conversion, material balance, normal tetratriacontane, ion reaction, ion radical reaction

ABSTRACT: The radiation-thermal conversion of n-tetratriacontane was studied with the tests run in the channel of a water-water type nuclear reactor at temperatures from 150-380 C at integral doses of 6 x 10^{21} ev/gm. The amount of hydro-

containing products. The yield of polymers

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L 34473-65

ACCESSION NR: AP5001990

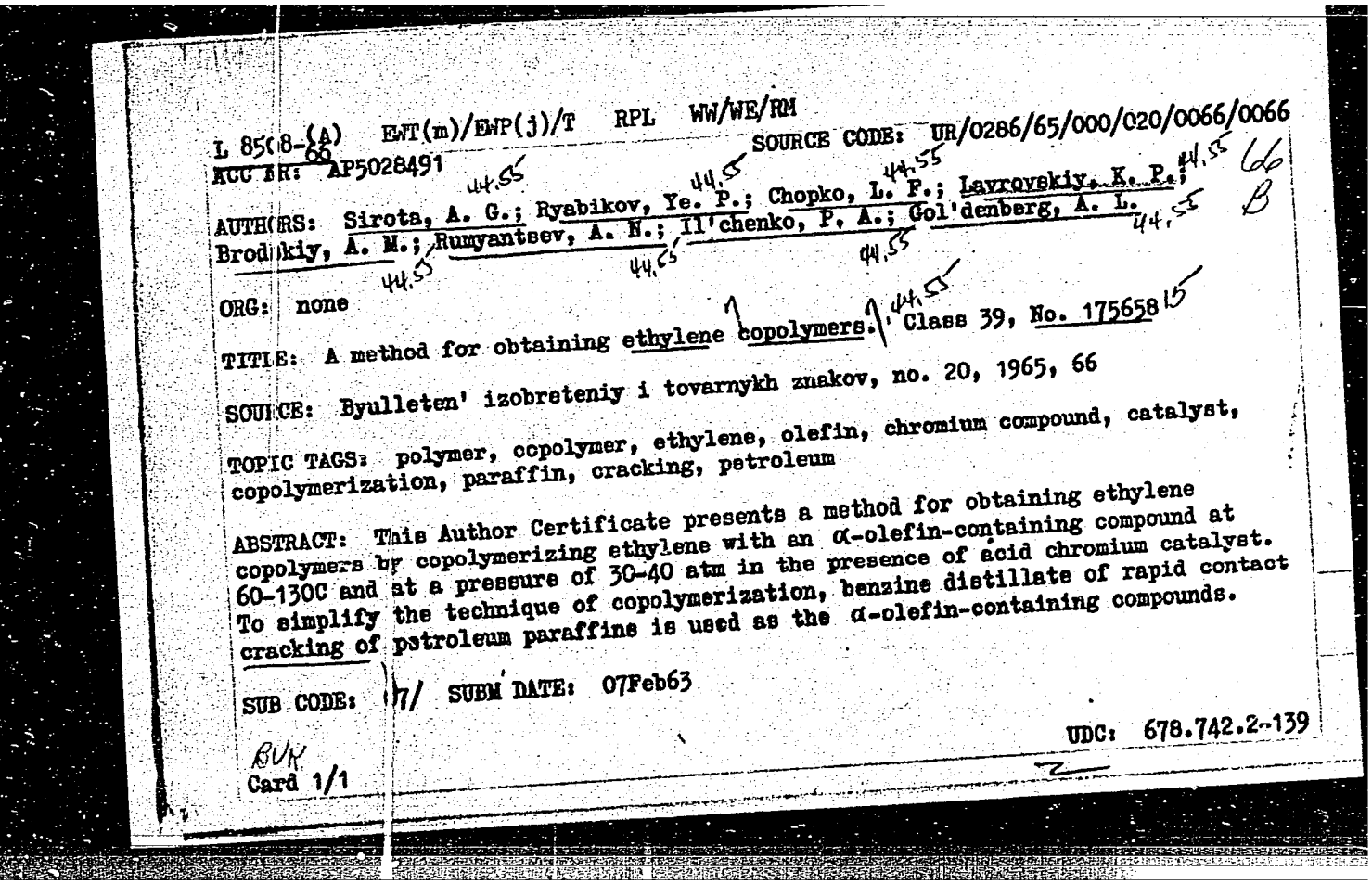
though their molecular weight decreased with temperature increase; a greater number of methyl groups was present in the higher temperature radiolysis meric products. 10-20% of the polymers formed was based on unsatura

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva (Institute of Petrochemical Synthesis)

SUBMITTED: 09Jul64 ENCL: 00 SUB CODE: OC, GC

NR REF SOV: 005 OTHER: 001

Card 2/2



L 8508-66 EWT(m)/EWP(j)/T RPL WW/WE/RM

ACC NR: AP5028491 SOURCE CODE: UR/0286/65/000/020/0066/0066

AUTHORS: Sirota, A. G.; Ryabikov, Ye. P.; Chopko, L. F.; Lavrovskiy, K. P.; Brodskiy, A. M.; Rumyantsev, A. N.; Il'chenko, P. A.; Gol'denberg, A. L.

ORG: none

TITLE: A method for obtaining ethylene copolymers. Class 39, No. 175658

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 66

TOPIC TAGS: polymer, copolymer, ethylene, olefin, chromium compound, catalyst, copolymerization, paraffin, cracking, petroleum

ABSTRACT: This Author Certificate presents a method for obtaining ethylene copolymers by copolymerizing ethylene with an α-olefin-containing compound at 60-130C and at a pressure of 30-40 atm in the presence of acid chromium catalyst. To simplify the technique of copolymerization, benzine distillate of rapid contact cracking of petroleum paraffins is used as the α-olefin-containing compounds.

SUB CODE: 07/ SUBM DATE: 07Feb63

UDC: 678.742.2-139

BVK
Card 1/1

L 62082-65 EPF(c) EPF(n)-2/EWG(j)/EWA(h)/EWP(j)/EWT(m)/EWA(1) Pc-4/Pr-4/Pu-4/Peb
ACCESSION NR: AP5016839 GG/RM UR/0204/65/005/003/0351/0362
547.21-14:541.15:542.92

AUTHORS: Brodskiy, A. M.; Lavrovskiy, K. P.; Tutov, V. B.; Eglit, A. Kh.

TITLE: On the mechanism of radiation-thermal transformations of n.alkanes in liquid phase

SOURCE: Neftekhimiya, v. 5, no. 3, 1965, 351-362

TOPIC TAGS: alkane, radiolysis, liquid phase, temperature relationship

ABSTRACT: The temperature relation of the radiation-thermal destruction of liquid hydrocarbons (normal paraffin $C_{34}H_{70}$) in the mixed nuclear radiation field was studied in the temperature interval 150-400C in an effort to obtain more specific evaluations of hydrocarbon radiolytic decomposition and to evaluate the radical concentrations. At 150 and 250C the quantities of the liquid radiolysis products were too small for the yield determination; their content of gases and vapor at various temperatures is tabulated. The yields of different products at temperatures of 315, 260, and 380C with respect to the number of C atoms in the molecule are presented graphically. Proceeding from the balance equation for the quasi-stationary concentrations of iso- and normal radicals inside and outside a wet cell, the equations

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L 62082-65

ACCESSION NR: AP5016839

for the yield of lower saturated and unsaturated hydrocarbons are derived. They show that the strong temperature dependence of both hydrocarbon types was determined by the isoradical decomposition outside the wet cell and was proportional to the constant of the reaction velocity of isoradical destruction (both processes had equal activation energies). These equations were used also for the evaluation of the pre-exponential factor of the reactions of alkyl radical decomposition in fluid. The evaluation of different radical concentrations in and outside the cell showed that the destruction of the C-C bonds prevailed during the primary radiation effect with a simultaneous formation of primary (normal) radicals in the cell, while the hydrocarbon radicals outside the cell consisted of secondary radicals formed from the normal ones through the replacement reactions. Orig. art. has: 3 tables, 4 figures, and 6 formulas.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR im. A. V. Topchiyeva (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 17Jul64 ENCL: 00 SUB CODE: OC

NO REF SOV: 012 OTHER: 008

Card 2/2

SHEVEL'KOVA, L.V.; BRODSKIY, A.M.; KALINENKO, R.A.; LAVROVSKIY, K.P.

Mechanism underlying the formation of secondary products in the high-temperature cracking of ethane. Dokl. AN SSSR 160 no.2: 409-412 Ja '65. (MIRA 18:2)

1. Institut neftekhimicheskogo sinteza im. A.V. Topchiyeva AN SSSR. 2. Chlen-korrespondent AN SSSR (for Lavrovskiy).

SHEVELKOVA, L.V.; BRONSKIY, A.M.; KALINENKO, R.A.; LAVROVSKIY, K.P.

Mechanism of the formation of some secondary products in the high-temperature cracking of ethane. Kin. i kat. 6 no.4:592-600 Jl-Ag '65. (MIRA 18:9)

1. Institut neftekhimicheskogo sinteza imeni A.V.Topchiyeva AN SSSR.

L 1363-66 EWT(m)/EPF(c)/EWP(j)/EWA(c) RPL WW/RM

ACCESSION NR: AP5020833 UR/0020/65/163/004/0920/0923

AUTHOR: Brodskiy, A. M.; Kalinenko, R. A.; Shevel'kova, L. V.; Yampol'skiy, Yu. P.; Lavrovskiy, K. P.

TITLE: Mechanisms of the conversions of ethylene and acetylene during hydrocarbon pyrolysis

SOURCE: AN SSSR Doklady, v. 163, no. 4, 1965, 920-923

TOPIC TAGS: pyrolysis, acetylene, ethylene, temperature conversion, excited state, hydrocarbon

ABSTRACT: An explanation of the course and mechanism of acetylene conversion under ethylene pyrolysis conditions was sought in this study of pyrolysis in the 800-1000 C range of mixtures of ethylene and tagged acetylene. Acetylene conversion was determined from the distribution of radioactivity in the pyrolysis products. At the lower temperatures none of the pyrolysis products except coke was formed from acetylene, and formation of coke and methane was minimum at 900 C. Participation of acetylene in the formation of other gaseous products increased with temperature. The energy of activation is about 10 kcal/mol. It was concluded that benzene was formed equally by reactions involving no acetylene

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L 1363-66

ACCESSION NR: AP5020833

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and reactions in which only acetylene and its conversion products took part. Traces of cyclohexane formed below 900 C disappeared at elevated temperatures, and apparently it is intermediate in the formation of untagged benzene. Very little acetylene was used to form methane and divinyl. The coke deposited at the lower temperature was primarily formed directly from the acetylene. At 950-1000 C the coke was formed as a result of the conversion of ethylene and other hydrocarbons having low specific radioactivity. The energy of activation for these reactions is about 80 kcal/mol. The acetylene added initially to the ethylene decomposed much faster than acetylene formed during the course of pyrolysis. This may be associated with the formation of the excited triplet state in acetylene but needs further investigation. Orig. art. has: 3 figures, 11 equations, and 1 table

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute of Petrochemical Synthesis AN SSSR)

SUBMITTED: 16Oct64 ENCL: 00 SUB CODE: GC

NR REF SOV: 004 OTHER: 004

Card 2/2

L 01238-67 EWT(m) JR

ACC NR: AT6031142 SOURCE CODE: UR/3136/66/000/066/0001/0024

AUTHOR: Aleksenko, Yu. N.; Brodskiy, A. M.; Zabelin, A. I.; Kevrolev, V. P.; Lavrovskiy, K. P.; Makarov, D. V.; Tetyukov, V. D.; Fish, Yu. L.

ORG: none

TITLE: Analysis of tests of a unit for the atomic power station "Arbus" for regenerating a gas oil coolant by degeneration hydrogenation

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-1066, 1966. Analiz ispytaniy ustanovki destruktivno-gidrogenizatsionnoy regeneratsii gazoylevogo teplonositelya AES Arbus, 1-24

TOPIC TAGS: organic moderated reactor, organic coolant, atomic energy, atomic power station, organic cooled nuclear reactor, catalyst, catalyst regeneration/Arbus-I atomic power station

ABSTRACT: An analysis is made of data obtained in the experimental operation of the "Arbus-I" atomic power station and related laboratory studies. The "Arbus-I" differs from other atomic power stations using organic-cooled and-organic-moderated reactors in that its gas oil coolant is regenerated by means of a hydrogenation-

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L 01238-67
ACC NR: AT6031142

degradation process. The investigation showed that regeneration through hydrogeneration-degradation considerably decreases radiolytic losses in the coolant. The principal parameters for the regeneration of hydrostabilized gas oils are given and the useful life of the aluminocobalt molybdenum catalyst under adopted operating parameters is determined. Orig. art. has: 8 figures and 5 tables. [SP]

SUB CODE: 20/ SUBM DATE: none/

Card 2/2 axm

ROTENBURG, Iosif Solomonovich, kand. tekhn. nauk, dots.; POLYAKOV, Mikhail Pavlovich, kand. tekhn. nauk, dots.; ZOLOTAREV, Nikolay Vasil'yevich, kand. tekhn. nauk, dots.; LAVROVSKIY, Vadim Aleksandrovich, inzh.; DADENKOV, Yu.N., doktor tekhn. nauk, prof., retsenzent; BEGAM, L.G., kand. tekhn. nauk, retsenzent; BORODINA, N.N., red.

[Designing bridge crossings over large streams] Proektirovanie mostovykh perekhodov cherez bol'shie vodotoki. Moskva, Vysshaia shkola, 1965. 335 p. (MIRA 18:6)

1. Chlen-korrespondent AN Ukr.SSR (for Dadenkov). 2. Rukovoditel' laboratorii mostovoy gidravliki i gidrologii TSental'nogo nauchno-issledovatel'skogo instituta svyazi (for Begam).

KOGAN, V. G.; LAVROVSKIY, V.A.

Determination of the pore size distribution function in a porous body. Koll. zhur. 26 no.6:680-685 N-D '64 (MIRA 18:1)

1. Institut dvigateley AN SSSR, Moskva.

KOGAN, V.G.; LAVROVSKIY, V.A.

Capillary model of highly disperse and porous bodies as applied to filtration phenomena. Koll.zhur. 27 no.3:383-387 My-Je '65. (MIRA 18:12)

1. Institut radiotekhniki i elektroniki AN SSSR, Moskva. Submitted July 22, 1963.

30(6)

AUTHOR: Lavrovskiy, V. M., Doctor of Historical Sciences SOV/30-59-1-21/57

TITLE: Meeting of Historians From the USSR and England (Vstrecha istorikov SSSR i Anglii)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 105 - 106 (USSR)

ABSTRACT: In September 1958, a delegation of Soviet historians visited England. Ye. A. Kosminskiy, B. A. Rybakov, V. M. Khvostov, A. V. Artsikhovskiy, V. G. Trukhanovskiy and the author of this article were taking part under the direction of A. A. Gruber, President of the Natsional'nyy komitet sovetskikh istorikov (National Committee of Soviet Historians). The object of this visit was to come to know scientific institutions in England, and to hold a joint scientific conference. 6 reports were given on both sides, i. e. one report on each basic subject by a Soviet and an English expert. A. V. Artsikhovskiy reported on recent Soviet work in the field of archeology. The report by M. N. Tikhomirov, who was absent due to illness, was dedicated to the origin of Christianity in Russia. B. A. Rybakov reported on the character of Russian feudalism in the

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early Middle Ages. Each of these subjects was described in English history by an English historian, which caused occasional violent discussions. V. M. Lavrovskiy reported on English peasantry on the eve of the middle-class revolution in the 40's of the 17th century, and immediately after. This subject disclosed opposite opinions on various questions. V. M. Khvostov reported on Russian and English politics concerning the unification of Germany (in the years 1848 -71). The question of sources, methods and plans for the mode of writing the history of World War II was regarded in reports by V. G. Trukhanovskiy, Ch. Webster, A. Frankland. Here principal contrasts became evident in the treatment of this subject by English and Soviet historians. Finally, the author states the great interest of English historians in the work of Soviet historians in the field of English history, particularly in the activity of the Gruppa po istorii Anglii (Group for the History of England) at the Institut istorii Akademii nauk SSSR (Institute of History, Academy of Sciences, USSR), in dissertations defended in the Soviet Union, etc. They are

willing to support an exchange of archives material, and the publication of articles by Soviet Scholars in British periodicals.

Card 3/3

DUDNIK, D.M., inzh.; LAVROVSKIY, Yu.A., inzh.; LOMBARDICH, N.N., inzh.

Reducing the flammability of "Stiropor." Trudy OTIPiKhP 12:129-138 '62. (MIRA 17:1)

1. Nauchno-issledovatel'skaya laboratoriya po kholodil'noy tekhnike Odesskogo tekhnologicheskogo instituta pishchevoy i kholodil'noy promyshlennosti.

L 46128-66 EWT(d)/EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) IJP(c) JD/DJ

ACC NR: AP6024047 SOURCE CODE: UR/0193/66/000/003/0018/0019

44
B

AUTHOR: Lavrskiy, N. I.

ORG: None

TITLE: A press for force hardening large parts

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 3, 1966, 18-19

TOPIC TAGS: hardening, metal press, pneumatic device

ABSTRACT: The author describes a press for force hardening large parts (see figure). This press consists of the frame, upper cylinder (1), upper piston (2), small piston (3), clamping ring (4), table, lower piston (5) and lower cylinder (6). Oil, water and other neutral fluids are used as hardening media. The base of the frame is connected to the oil tank by pipelines. The oil tank contains a refrigerating unit. The cooled oil is fed by a pump into the base of the frame by the lower branch pipe and heated oil returns to the tank by gravity flow through a higher branch pipe. The press is supplied with compressed air at 6 atm. The air enters the filter (7), goes through the pressure regulator (8) and the distributor valve (9). The distributor valve is used by the operator for controlling the upper piston. The small piston is always under pressure at its extreme position. The air acting on the small piston is supplied by the pressure regulator (10). In this position, the small piston is

UDC: 621.979:621.785.6:621.81

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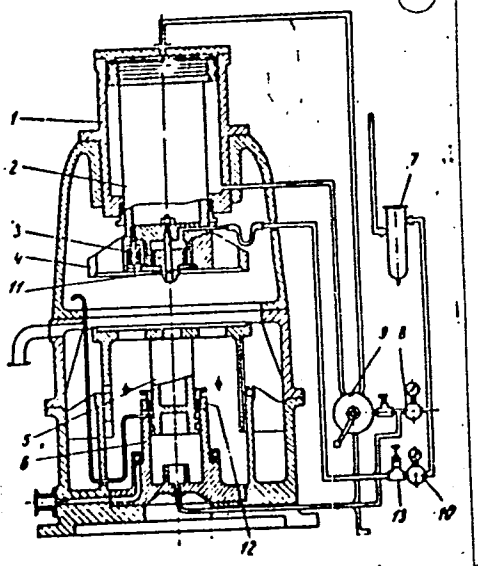
ACC NR: AP6024047

pressed against the cover (11). The lower piston is also held in its extreme position by air entering through the pressure regulator, and is pressed against the cover (12). The small piston centers the heated part with its conic end as the upper piston is lowered. The heated part is centered with respect to mechanisms which have been set up on the table with respect to the clamping disc. With further movement downward, the clamping disc presses on the heated part and pushes it together with the table into the oil. The small piston is submerged for the moment and the air let out by the small piston cylinder is ejected into the atmosphere by the safety valve (13). This safety valve is preset to the required pressure. A part clamped in this manner will not warp during hardening. This is a unique press among Soviet press type equipment. The use of this press gives an annual saving of 5000 rubles. A press with a free floating clamping disc on a spherical support can be used in all branches of industry where a need exists for hardening large scale parts. Orig. art. has: 1 figure, 1 table.



SUB CODE: 13/ SUBM DATE: None

Card 2/2 JS

SPICYN, V.I; LAVRUCHINA, A.K. (Lavrukhina, A.K.); KRATOCHVIL, G., inz. (translator)

Use of nuclear energy in Czechoslovakia. Jaderna energie 3 no.8: 253-254 Ag '57

LAVRUK, B. [Lawruk, B.]

Parametric boundary value problems for elliptic systems of linear differential equations. Pts. 1-2. Bul Ac Pol mat 11 no.5:257-278 '63.

1. Katedra Analizy Matematycznej, Universytet, Warszawa.
Presented by S. Mazur.

S/044/62/000/011/020/064
A060/A000

AUTHOR: Lavruk, B.

TITLE: On a boundary problem for two second-order linear systems of the elliptic type

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 47, abstract 11B200 (2ème congr. math. hongrois, Budapest, 1960. Budapest, 1961, 111a/ /93 - 97)

TEXT: An example is cited of applying the author's results (RZhMat, 1959, 1535; 1960, 7690, 4050) to the calculation of the index of boundary problems of the form considered in those papers for a system of A.V. Bitsadze and for a system of Laplace equations.

V.K. Zakharov

[Abstracter's note: Complete translation]

Card 1/1

LAVRUK, B. (Warszawa)

Method of construction of conjugate boundary problems.
Annales Pol math 13 no.1 67-91 '63.

LAVRUK, B. R.

LAVRUK, B. R.: "One type of limit problem for elliptic systems of linear second-order differential equations." Min Higher Education Ukrainian SSR. L'vov State U imeni Ivan Franko. L'vov, 1956
(Dissertation for the Degree in Physicomathematical in Sciences).

SO: Knishaya Letopis', No. 23, 1956

LAVRUK, B.R

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/3 PG - 767
AUTHOR LAVRUK B.R.
TITLE Condition for the solvability of a boundary value problem for elliptic systems of linear differential equations of second order.
PERIODICAL Doklady Akad.Nauk 111, 23-25 (1956)
reviewed 5/1957

Let

$$A(x,\frac{\partial}{\partial x}) = \sum_{i=1}^{n} A_{ij}(x) \frac{\partial^2}{\partial x_i \partial x_j} + \sum_{i=1}^{n} A_i(x) \frac{\partial}{\partial x_i} + A(x)$$

be a differential operator being elliptic in D, where the coefficients A_{ij}, A_i and A are quadratic matrices being differentiable t+3 times, resp. t+2 times, resp. t+1 times ($t \geq 1$). Let the convex domain V with the (t+2)-times smooth boundary S lie in D. Let

$$B(y, \frac{\partial}{\partial x}) = \sum_{i=1}^{n} B_i(y) \frac{\partial}{\partial x_i} + B(y)$$

be a differential operator the coefficients B_i and B of which are quadratic

matrices of p-th order being continuously differentiable t+1 times resp. t times along S.

Let $\det \sum_{i=1}^{n} B_i(y)\, \nu_i(y) \neq 0$ if $y \in S$ and $\nu(y) = (\nu_1(y), \ldots, \nu_n(y))$ is the unit vector of the inner normal to S in y. The author considers the boundary value problem

(1) $$A(x, \frac{\partial}{\partial x})\, u(x) = 0 \qquad (x \in V)$$

(2) $$\lim_{x \to y} B(y, \frac{\partial}{\partial x})\, u(x) = f(y) \qquad (y \in S)$$

and seeks for a solution $u(x)$ of (1) being continuous in $V \cup S$ and two times differentiable in V, which satisfies (2) and for which there exists a

$$\lim_{x \to y} \sum_{i=1}^{n} B_i(y) \frac{\partial u(x)}{\partial x_i}$$

being uniform with respect to $y \in S$ if $x \in V$ along $\nu(y)$ tends to the point y.

Doklady Akad.Nauk 111, 23-25 (1956) CARD 3/3 PG - 767

Here f(y) is a given row continuous on S.
The consideration joins earlier investigations of the author and of Lopatinski (Doklady Akad.Nauk Ukr.SSR No.1-3 (1956)). By a formula of Green's type the manifold of the solutions of an auxiliary equation is mapped linearly and biuniquely onto the solutions V(x) of a similar boundary value problem which was treated by the author in an earlier paper. Herefrom a condition for the solvability of the given boundary value problem is derived. If this condition is satisfied and if f(y) is (t-1)-times continuously differentiable along S, where its derivatives on S satisfy the Hölder condition, then every solution of (1)-(2) is differentiable t times in V and their t-th derivatives satisfy the Hölder condition on S.

INSTITUTION: University, Ljvov.

LAVRUK, B.R.

SUBJECT USSR/MATHEMATICS/Functional analysis CARD 1/3 PG - 799
AUTHOR LAVRUK B.R.
TITLE On the index of an operator of the boundary value problem for elliptic systems of linear differential equations of second order.
PERIODICAL Doklady Akad.Nauk 111, 287-290 (1956)
reviewed 5/1957

Let

$$A(x, \frac{\partial}{\partial x}) = \sum_{i,j=1}^{n} A_{ij}(x) \frac{\partial^2}{\partial x_i \partial x_j} + \sum_{i=1}^{n} A_i(x) \frac{\partial}{\partial x_i} + A(x)$$

be an elliptic operator the coefficients of which are quadratic matrices of p-th order which are continuously differentiable in $D(x_1 \ldots x_n)$ (t+3)times, (t+2)times and (t+1)times, respectively. Let

$$B(y, \frac{\partial}{\partial x}) = \sum_{i=1}^{n} B_i(y) \frac{\partial}{\partial x_i} + B(y)$$

be a differential operator the coefficients of which also are quadratic matrices of p-th order which along the t+2 times smooth boundary S of a convex domain $V \subset D$ are continuously differentiable (t+1)times and t times, respectively. Here let

Doklady Akad.Nauk 111, 287-290 (1956) CARD 2/3 PG - 799

$\det \sum_{i=1}^{n} B_i(y)\, \nu_i(y) \neq 0 \quad (y \in S)$, $\nu(y) = (\nu_1(y), \ldots \nu_n(y))$ -unit vector of the inner normal of S. Let

$$\sum_{i=1}^{n} B_i(y)\, \nu_i(y) = \sum_{i,j=1}^{n} A_{ij}(y)\, \nu_i(y)\, \nu_j(y).$$

The author considers the operator $(A(x, \frac{\partial}{\partial x}), B(y, \frac{\partial}{\partial x}))$ and applies it to p-rowed matrices u(x) which are continuous in V S, two times continuously differentiable in V and for which there exists

$$\lim_{x \to y} \sum_{i=1}^{n} B_i(y)\, \frac{\partial u(x)}{\partial x_i}$$

$(x \in V, \quad y \in S, \quad x \to y$ on the normal $\nu(y))$. Besides the adjoint operator $(A^*(x, \frac{\partial}{\partial x}), B^*(y, \frac{\partial}{\partial x}))$ is considered (Doklady Akad.Nauk Ukr.SSR 3, (1956)). The difference between the number of linearly independent solutions of

Doklady Akad.Nauk 111, 287-290 (1956) CARD 3/3 PG - 799

$$A(x, \frac{\partial}{\partial x})u(x) = 0 \qquad (x \in V)$$

$$\lim_{x \to y} B(y, \frac{\partial}{\partial x})u(x) = 0 \qquad (y \in S)$$

and the number of linearly independent solutions of

$$A^*(x, \frac{\partial}{\partial x})v(x) = 0 \qquad (x \in V)$$

$$\lim_{x \to y} B^*(y, \frac{\partial}{\partial x})v(x) = 0 \qquad (y \in S)$$

is denoted as the index of $(A(x \frac{\partial}{\partial x}), B(y, \frac{\partial}{\partial x}))$. The author proves that the index does not depend on the coefficients $A_i(x)$ $(i=1,\ldots,n)$, $A(x)$ and $B(y)$.
The proof bases on an assertion of existence and uniqueness for a matrix $\Gamma(x,z)$ which has all properties of a normal fundamental matrix.

INSTITUTION: Franko University, Ljvov.

LAVRUK, B.R.

On regular solutions of boundary problems for elliptical systems of linear differential equations of the second order for a half plane. Dop. AN URSR no.2:107-111 '57. (MLRA 10:5)

1. L'vivs'kiy derzhavniy universitet im. Iv. Franka. Predstaviv akademik AN URSR G.M. Savin.
(Differential equations)

AUTHOR: Lavruk, B.R. SOV/20-121-6-4/45

TITLE: On the Dependence on the Highest Coefficients of the Index of the Operator of a Boundary Value Problem for an Elliptic System of Second Order Linear Differential Equations (O zavisimosti indeksa odnogo operatora granichnoy zadachi dlya ellipticheskoy sistemy lineynykh differentsial'nykh uravneniy vtorogo poryadka ot starshikh koeffitsiyentov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 6, pp 970-972 (USSR)

ABSTRACT: The present paper is a continuation of [Ref 1]. For the operator $(A(x, \frac{\partial}{\partial x}), B(y, \frac{\partial}{\partial x}))$ introduced there the following theorem is proved:
Theorem: The index of $(A(x, \frac{\partial}{\partial x}), B(y, \frac{\partial}{\partial x}))$ does not change for arbitrary variations of the highest coefficient of $A(x, \frac{\partial}{\partial x})$ and $B(y, \frac{\partial}{\partial x})$ if during these variations the following four conditions are satisfied: 1. Condition of ellipticity for $A(x, \frac{\partial}{\partial x})$. 2. The condition $\det \sum_{i=1}^{n} B_i(y)\, \nu_i(y) \neq 0$, $(y \in S)$, $\nu(y) = (\nu_1(y), \ldots, \nu_n(y))$ unit vector of the interior normal of S (S bounds the domain V in

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On the Dependence of the Highest Coefficients of the Index of the Operator of a Boundary Value Problem for an Elliptic System of Second Order Linear Differential Equations

SOV/20-121-6-4/45

which the boundary value problem for (A,B) is considered). 3. and 4. The conditions for the reducibility to regular integral equations [Ref 3] of the boundary value problems which correspond to the operators (A,B) and (A*,B*) (for (A*,B*) see [Ref 2]). There are 3 Soviet references.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet imeni Iv.Franko (L'vov State University imeni Iv.Franko)

PRESENTED: April 15, 1958, by I.N.Vekua, Academician

SUBMITTED: April 14, 1958

Card 2/2

LAVRUK, B.K.

16(1) PHASE I BOOK EXPLOITATION SOV/2660

Vsesoyuznyy matematicheskiy s"yezd. 3rd, Moscow, 1956

Trudy. t. 4: Kratkoye soderzhaniye sektsionnykh dokladov. Doklady inostrannykh uchenykh (Transactions of the 3rd All-Union Mathematical Conference in Moscow. Vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Ed. (Title page): O.N. Shevchenko; Editorial Board: A.A. Abramov, V.G. Boltyanskiy, A.M. Vasil'yev, B.V. Medvedev, A.D. Myshkis, S.M. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetayev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

Card 7/34

LAVRUK, B.

On a certain general boundary value problem of elliptic systems of linear differential equations of the second order. Bul Ac Pol mat 10 no.3:131-138 '62.

1. Katedra Analizy Matematycznej, Uniwersytet, Warszawa. Presented by S.Mazur.

LAVRUK, B. [Lawruk, B.] (Warszawa)

Single-valued solvability of the general boundary problem for homogeneous linear systems of differential equations of second order of elliptic type with permanent coefficients in semi-space. Annales Pol math 14 no. 1:85-95 '63.

LAVRUK, I. V.

LAVRUK, I. V. - "Investigation of the Wear Resistance of Cast Iron Used for the Cylinder Liners of Truck-Tractor Engines." Min Higher Education USSR. Ukrainian Order of Labor Red Banner Agricultural Inst. Kiev, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

So; Knizhnaya Letopis' No 3, 1956

BEREZIN,P.G.; LAVRUK,I.V.; SOKOL,A.N.

Effect of the size of the specimen on mechanical wear testing data.
Zav.lab.21 no.7:881-882 '55. (MLRA 8:10)
(Mechanical wear)

LAVRUK, I.V

137-58-4-8262

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 276 (USSR)

AUTHORS: Preys, G.A., Lavruk, I.V.

TITLE: Dependence of Coefficient of Friction on Unit Pressure in the Sliding Friction of Various Irons (Zavisimost' koeffitsiyenta treniya ot udel'nogo davleniya pri trenii skol'zheniya razlichnykh chugunov)

PERIODICAL: Tr. 1-y nauchno-tekhn. konferentsii. Kiyevsk. in-t grazhd. vozdushn. flota, Moscow, 1956, pp 257-264

ABSTRACT: Determination of the dependence of the force of friction (F) and the coefficient of F on the normal pressure in sliding F of various irons was made on a machine reproducing oxidizing wear (W), [fretting corrosion, Transl. Ed. Note] thermal W, and W with seizure. The standard disk was made from pearlitic iron with O_2 blast. The rate of slip was constant: 0.25 m/sec. The coefficients of F were determined in accordance with unit pressure. Analysis of the microstructure of the F surfaces and the data on magnitudes of W showed that the coefficient of F diminishes in oxidizing (corrosive) W. Seizing phenomena are diminished under these conditions. The coefficients of F of the

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137-58-4-8262

Dependence of Coefficient of (cont.)

irons investigated have been more precisely defined, and their values adduced. The coefficients of F determined by various investigators differ in magnitude, and it follows that it is necessary to employ a unified method in such determinations. As the normal pressure rises, the coefficient of F increases until steady S sets in, whereupon it becomes approximately constant.

A. K.

1. Iron--Friction--Pressure effects 2. Iron--Abrasion--Test results
3. Friction--Theory

Card 2/2

LAVRUK, I.V.

137-58-4-8259

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 276 (USSR)

AUTHORS: Preys, G.A., Lavruk, I.V.

TITLE: Effect of Unit Pressure on the Wear of Various Irons (Vliyaniye udel'nogo davleniya na iznos razlichnykh chugunov)

PERIODICAL: Tr. 1-y nauchno-tekhn. konferentsii. Kiyevsk. in-t grazhd. vozdushn. flota. Moscow, 1956, pp 273-282

ABSTRACT: One of the most destructive forms of wear is seizing, which is particularly pronounced at moderate speeds. Experiments were conducted with a substantial number of irons (I). The characteristics and the microstructure of the I are described. The tests were run on a friction-testing machine on which various types of wear were reproduced. A description of the experiments and their methodology is given. A standard specimen was made of pearlitic gray I. The degree of wear (W) was determined by weighing specimens of 5 mm diameter, subjected to friction without lubrication against the edge of a standard disk. The experiments were run at various unit pressures. The W of crude and heat-treated I varied differently with change in unit pressure. One of the basic methods employed to minimize W in

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137-58-4-8259

Effect of Unit Pressure on the Wear of Various Irons

machine parts is the creation of conditions of friction in which a lubricant film is created between the rubbing metal parts. In cases of incomplete lubrication, the decisive role is that of the adsorption capacity of the oil film and the reaction between metals and lubricant. The employment of lubricant reduces the degree of induced W substantially. A.K.

1. Iron--Abrasion--Pressure effects 2. Iron--Abrasion--Test results
3. Friction testing machines--Applications

Card 2/2

TARASOV, Viktor Savvich; LAVRUK, I.V., kand.tekhn.nauk, retsenzent; ONISHCHENKO, N.P., inzh., red.

[Safety manual for motor-vehicle repair workers] Pamiatka po tekhnike bezopasnosti dlia slesarei po remontu avtomobilei. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 48 p. (MIRA 13:3)
(Motor vehicles--Maintenance and repair)
(Industrial safety)

LAVRUK, Valeriy Ivanovich; MARCHUKOVA, M.G. [Marchukova, M.H.], red.; LAVRENOVA, N.B., tekhn. red.

[The first ones on the Caspian; sketches on shock workers of communist labor] Pervye na Kaspii; ocherki ob udarnikakh kommunisticheskogo truda. Moskva, Izd-vo "Morskoi transport," 1961. 73 p. (MIRA 14:7)

(Caspian Sea--Petroleum workers) (Socialist competition)

8(0) SOV/112-59-5-8483

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, pp 10-11 (USSR)

AUTHOR: Ryabov, B. M., and Lavrukhin, A. M.

TITLE: Some Problems in Determining the DC Wet Flashover Voltage of Insulators

PERIODICAL: Tr. Mezhvuzovskoy nauchno-tekhn. konferentsii po dal'nim elektroperedacham. 1956, Sekts. 4, L., 1957, pp 147-160

ABSTRACT: The wet flashover voltage is the most important characteristic of outdoor insulators. Insofar as there is no experimental data on DC wet flashover voltages of 300- and 400-kv insulators, nor is there any operating experience, the need arises to determine the wet flashover voltages for single insulators, insulator strings, and stacks; the voltages should be measured on AC and DC under identical conditions. It is important to determine how wet flashover voltages depend on water-spraying conditions, on test outfit parameters, on voltage-application time, etc., in DC insulator tests. A 328,600/2x220-v, 100-kva testing transformer connected via an insulating

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Some Problems in Determining the DC Wet Flashover Voltage of Insulators

transformer was used for AC tests. The test outfit impedance did not exceed 250 kohms in testing single insulators and 450 kohms in testing strings and stacks. In preliminary tests of ShT-35 insulators, with a protective resistor of R_z = 1,200 kohms, no sparkover was observed. At a voltage higher by 8-12% than the wet flashover voltage, with R_z = 1 to 10 kohms, a "partial" arc was observed between the edge of the lower insulator rib and the pin; the arc inception was accompanied by an abrupt increase of pre-puncture current. With R_z < 80 kohms, the "partial" arc turned into a sparkover covering the entire insulator surface. In all major experiments, the value R_z = 1-5 kohms was used. Tap water of 12,300-13,300 ohms.cm resistivity was used; an average rate of spraying of 5 mm/min with a deviation within 20% in some sections was used. The voltage was raised up to 50% of the wet flashover value in 3-5 seconds; the total time of voltage rise was 20-30 seconds. In the first voltage raise, which was made after 5-10 min of spraying the type P-7 string, the discharge did not take place even when the voltage exceeded by 25-35% the

Some Problems in Determining the DC Wet Flashover Voltage of Insulators

wet flashover value. The string suffered a flashover after one or two of its units were short-circuited. In the tests, the P-7 string was pre-treated by flashovers with a part of its units short-circuited. After the short-circuiting jumpers were removed, 10 consecutive string flashovers were realized; the average wet-flashover value was computed from the last 6 flashovers. The wet flashover voltage grows in proportion to the number of units in the string; it is lower for the negative polarity of the conductor. For an ISHD-35 insulator, the wet flashover voltage is somewhat higher for the negative polarity on the conductor. These differences are due to surface wetting conditions, pre-puncture currents, and the development of the flashover proper. The time of discharge development, from the moment of voltage application to the moment of flashover, depends on the applied voltage; the higher the voltage, the shorter is the time; the time depends also on the number and type of units in the string. A voltage can be selected at which only partial arcs with pre-puncture currents of 20-25 ma will be observed; no sparkover will take place. With a lower rate

Some Problems in Determining the DC Wet Flashover Voltage of Insulators

of spraying (2 mm/min), the flashover voltage is more dependent on the number of preliminary discharges. The experiments with a string that consisted of 3 P-7 units, with a negative conductor, and a spraying rate of 2 mm/min, have shown that the first flashover value is stable; it differs only slightly from the average wet-flashover value. A slight trend toward lower flashover voltages with increasing the number of discharges has been observed. Time interval between individual flashovers (1-10 min) has practically no effect on the wet flashover voltage. The wet flashover voltage of a string consisting of 3 P-7 units subjected to 2 mm/min spraying and negative-polarity 100-kv voltage with 3-4-min intervals between discharges has proved to be considerably lower than the wet flashover voltage obtained with a gradual raising of voltage and a spraying rate of 5 mm/min. A rapid raising of voltage results in a higher wet flashover value during the pre-puncture current development (?).
Bibliography: 2 items. (Leningrad Polytechnic Institute imeni M. I. Kalinin)

N.V.N.

LAVRUKHIN, A.M., inzh.

High-tension d.c. cables. Energokhoz. za rub. no.2:40 Mr-Ap '59. (MIRA 12:5)
(Cables, Submarine)

LAVRUKHIN, A.M.; RYABOV, B.M.; NIKOL'SKIY, N.K.

Leakages along the insulators of the overhead direct current line in various meteorological conditions. Izv. NIIPT no.4:76-81 '59. (MIRA 13:2)

(Electric insulators and insulation)
(Electric currents, Leakage)

KOVAL'SKAYA, O.T.; LAVRUKHIN, A.M.; NIKOL'SKIY, N.K.; RYABOV, B.M.

Study of corona losses on an experimental span of a d.c. power transmission line. Izv. NIIPT no.5:127-135 '60. (MIRA 14:1)
(Corona (Electricity)) (Electric lines--Overhead)

CHERKASHIN, Vasiliy Ivanovich; LAVRUKHIN, Anatoliy Mikhaylovich; KUZNETSOV, N.S., inzh., red.; LISITSYN, S.V., inzh., red.; SOMOVA, T.M., inzh., red.vypuska; DUGINA, N.A., tekhn.red.

[Advanced laying-out methods in metal cutting] Peredovye metody razmetki v instrumental'nom dele. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 53 p. (Biblioteka razmetchika, no.10). (MIRA 14:2)
(Laying out (Machine-shop practice))

KOVAL'SKAYA, O.T.; LAVRUKHIN, A.M.; NIKOL'SKIY, N.K.; RYABOV, B.M.; TIKHODEYEV, N.N.

Comparison of corona losses in a.c. and d.c. electric power transmission lines with equal bundled conductors. Izv. NIIPT no.6:155-163 '60. (MIRA 14:7)
(Electric power distribution)
(Corona (Electricity))

DAVYDOVA, S.L.; PURINSON, Yu.A.; LAVRUKHIN, B.D.; PLATE, N.A.

Synthesis of optically active unsaturated silicon hydrocarbon with an asymmetrical silicon atom. Izv. AN SSSR Ser. khim. no.2:387-389 '65. (MIRA 18:2)

1. Institut neftekhimicheskogo sinteza im. A.V. Topchiyeva AN SSSR.

L 35328-66 EWT(m)/EWP(j) RM

ACC NR: AP6026835 SOURCE CODE: UR/0020/66/166/002/0349/0352

AUTHOR: Andrianov, K.A. (Academician); Fedin, E.I.; Lavygin, I.A.; Gorskaya, N.V.; Lavrukhin, B.D.

ORG: Institute of Organoelemental Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Reaction of 8-hydroxyquinoline tributoxytitanium with triethyl hydroxysilane

SOURCE: AN SSSR. Doklady, v. 166, no. 2, 1966, 349-352

TOPIC TAGS: spectrometer, reaction mechanism, titanium compound, silane, esterification, chemical stability

ABSTRACT: A nuclear magnetic resonance spectrometer was used for studying the mechanism of the reaction between 8-hydroxyquinoline tributoxytitanium and triethyl hydroxysilane. Spectra are given for various reagent concentrations. The first event in the reaction is apparently coordination of the oxygen in the hydroxyl radical of the triethyl hydroxysilane with a titanium atom which results in transesterification by the mechanism of bimolecular nucleophilic substitution. Substitution of a single butoxyl group probably results in such an unstable molecule that disproportionation takes place with the formation of stable compounds having tetracovalent and hexacoordinate saturated titanium atoms. The experimental procedure is described.

Orig. art. has: 1 figure and 1 table. [JPRS: 36, 455]

SUB CODE: 07 / SUBM DATE: 21Jul65 / ORIG REF: 002

Card 1/1 UDC: 546.824

SELIN, M.Ye.; LAVRUKHIN, D.S.

Remarks on the article by A.P.Kostiuk, D.IA.Evdokimova "Isotherm of ...e adsorption of germanium from solutions on activated carbon." Izv.vys.ucheb.zav.; khim. i khim. tekh. 6 no.6: 1049-1050 '63. (MIRA 17:4)

SELIN, M.Ye.; LAVRUKHIN, D.S.; KULEMINA, L.B.

Adsorption by NaA zeolites from alcohol-water solutions.
Koll. zhur. 26 no.4:502-505 Jl-Ag '64. (MIRA 17:9)

SELIN, M.Ye.; LAVRUKHIN, D.S.

Use of zeolites for the purification of nitrogen-hydrogen mixtures.
Khim. i tekh. topl. i masel 10 no.8:33-34 Ag '65. (MIRA 18:9)

LAVRUKHIN, G.M.; GNATYSHAK, N.N.

Technological processes of the manufacture of ceramic-metal friction disks. Avt. prom. 31 no.6:41-43 Je '65.
(MIRA 18:10)

1. TSentral'nyy nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni avtomotornyy institut.

LAVRUKHIN, G.M.; VOROB'YEV, G.V.

Instrument for determining the fuel consumption of an automobile.
Avt.trakt.prom. no.10:30-32 O '54. (MLRA 7:10)

1. Nauchnyy avtomotornyy institut.
(Automobiles--Fuel consumption)

LAVRUKHIN, G.M.; NARDOV, K.M.

Testing cermets. Avt. prom. no.1:14-16 Ja '58. (MIRA 11:2)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut (for Lavrukhin). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut aviatsionnykh materialov (for Nardov).
(Cermets)

LAVRUKHIN, G.M.

Apparatus for determining the sliding of a pair. Trakt. i sel'khozmash. no.12:35 D '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.

SOV/137-57-10-19062

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 91 (USSR)

AUTHOR: Lavrukhin, G.S.

TITLE: A Process for the Rolling of Periodically Recurrent Sections (O tekhnologii prokatki periodicheskikh profiley)

PERIODICAL: V sb.: Ratsionalizatsiya profiley prokata. Moscow, Profizdat, 1956, pp 325-333

ABSTRACT: As the result of experimental work in the periodically recurrent-shape rolling (R) of small sections (0.2-10 kg), performed on an experimental mill and an industrial rolling mill, a method is developed to make it possible to calculate the required grooving. Various methods of cutting the patterns into the passes have been developed and tested, as have designs for fixtures and mill equipment. Calculation of the savings possible when the drop forging of a single part is replaced by R under industrial conditions shows that ~40% of the metal is economized thereby and that the cost is reduced by 32%. An investigation of a number of plants shows a sufficiently large number of parts the manufacture of which may properly be converted to deformed R. An album of industrial flow sheets has been developed. S.G

Card 1/1

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 70 (USSR) SOV/137-58-11-22338

AUTHORS: Lavrukhin, G.S., Durnev, V.D.

TITLE: Some Problems of Technology and Equipment in Periodic Long Rolling (Nekotoryye voprosy tekhnologii i oborudovaniya pri prodol'noy periodicheskoy prokatke)

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu: "Sovrem. dostizh. prokatn. proiz-va". Leningrad, 1958, pp 103-108

ABSTRACT: A review is presented of materials of the Leningrad Polytechnic Institute im. Kalinin on matters of the theory and practice of periodic rolling (PR). These materials were accumulated in rolling shapes 0.1 to 50 kg in weight to undergo subsequent machining or drop forging into final shape. A method of analysis of pass grooving for PR of a particular strip is presented. The analysis is performed in the following sequence: a) Determining dimensions of initial billet; b) determining dimensions of flash; c) calculation of forward slip; and d) determination of pass dimensions. Analysis of the rolling shows that the calculation of forward slip should be on the basis of the effective radius of the pass, which corresponds to 50 to 70% of the depth of the groove.

Card 1/2

SOV/137-58-11-22338

Some Problems of Technology and Equipment in Periodic Long Rolling

Data are presented on the technology of experimental PR, and design is presented of a special equipment for feeding strip to the roll with precise timing of delivery of the strip into the periodic groove so that the front end of the strip will match the proper pass section.

V. D.

Card 2/2

LAVRUKHIN, I., mayor

All are experts in the section. Starsh.-serzh. no.4(7):22 Ap '61. (MIRA 14:7)

(Radar, Military)

LAVRUKHIN, I., mayor

In radar units. Tyl i snab. Sov. Voor. Sil. 21 no.8:15-18 Ag '61. (MIRA 14:12)

(Radar, Military)

LAVRUKHIN, I.I. gornyy inzhener

Isolating voids by the method of leaving blocks of untouched ore.
Gor. zhur. no.4:16-17 Ap '55.
(Mining engineering) (MLRA 8:7)

LAVRUKHIN, I.I., gornyy inzhener.

Ways to reduce losses in mineral resources. Gor.zhur.no.3:14-18 Mr '56. (MLRA 9:7)

1.Upravleniye Chelyabinskogo okruga Gosgortekhnadzora SSSR.
(Mining engineering) (Ore handling)

LAVRUKHIN, I

M

EPP
.R 92928

LYUBOV' NARODOV MIRA K SOVETSKOMU SOYUZU (ZARUBEZHNYYE GOST) O STRANE SOVETOV) MOSKVA, IZD-VO ZANANIYE, 1952.

37 P. (VSESOYUZNOYE OBSHCHESTVO PO RASPROSTRANENIYU POLITICHESKIKH I NAUCHNYKH ZANITY. 1952, SERIYA L, NO 55)

RUSSIA

LAVRUKHIN, I.N., mayor

Challenge prize among initiators of a patriotic movement. Vest. protivovozd.obor. no.3:44-47 Mr '61. (MIRA 14:7)
(Radio, Military)

SHISHLYANNIKOV, Leonid Mikhaylovich [illegible] Nikolay Kuz'mich; KOZHOKIN, Moisey Iosifovich, zhurnalist; LAVRUKHIN, Ivan Nikitich, st. nauchn. sotr.; ITUMINA, R.G., red.

[Stubble and postharvest crops; practices on collective and state farms of the Talovaya Agricultural Administration in Voronezh Province and on collective and state farms in Belgorod Province] Pozhnivnye i poukosnye posevy; opyt kolkhozov i sovkhozov Talovskogo proizvodstvennogo upravleniia Voronezhskoi oblasti i kolkhozov i sovkhozov Belgorodskoi oblasti. Voronezh, Tsentr.-Chernozemnoe knizhnoe izd-vo, 1964. 33 p. (MIRA 18:1)

1. Belgorodskaya oblastnaya opytnaya sel'skokhozyaystvennaya stantsiya (for Lavrukhin).

ARITYUNOV, Valentin Osipovich; LAVRUKHIN, M.A., redaktor; ZABRODINA, A.A., tekhnicheskiy redaktor

[Electromechanical ratiometers] Elektromekhanicheskie logometry. Moskva, Gos.energ.izd-ve, 1956. 292 p. (MLRA 10:1)
(Electric meters)

VLASOV, Mikhail Fedorovich; PIGIN, Sergey Mikhaylovich; CHERVYAKOVA, Vera Ivanovna; LAVRUKHIN, M.A., retsenzent; TKALIN, I.M., retsenzent; LEKHSHTEYN, L.I., red.; ZHISHNIKOVA, O.S., tekhn. red.

[Assembly and adjustment of electric measuring devices]Sborka i regulirovka elektroizmeritel'nykh priborov. Izd.2., perer. Moskva, Gosenergoizdat, 1963. 260 p. (MIRA 16:3)
(Electric meters)

LAVRUKHIN, V., podpolkovnik

Rocket weapons of the United States. Voen.znan. 34 no.3:34-35 Mr '58.
(United States--Rockets (Ordnance)) (MIRA 11:4)

LAVRUKHIN, V., podpolkovnik.

Engineering machinery for landing from the air. Voen. znan. 34 no.7: 39 Jl '58. (MIRA 11:9)
(Military engineering) (Aeronautics, Military)

LAVRUKHIN, V.I., inzh.; NOVIKOV, V.I., inzh.; SIROTKIN, P.S., inzh.

Locating of the damage in the sheating of electric cables passing through sewers. Vest. sviazi 21 no.7:p.3 of cover :61. (MIRA 16:7)

1. Proizvodstvennaya laboratoriya Moskovskoy gorodskoy telefonnoy seti.
(Electric cables--Testing)

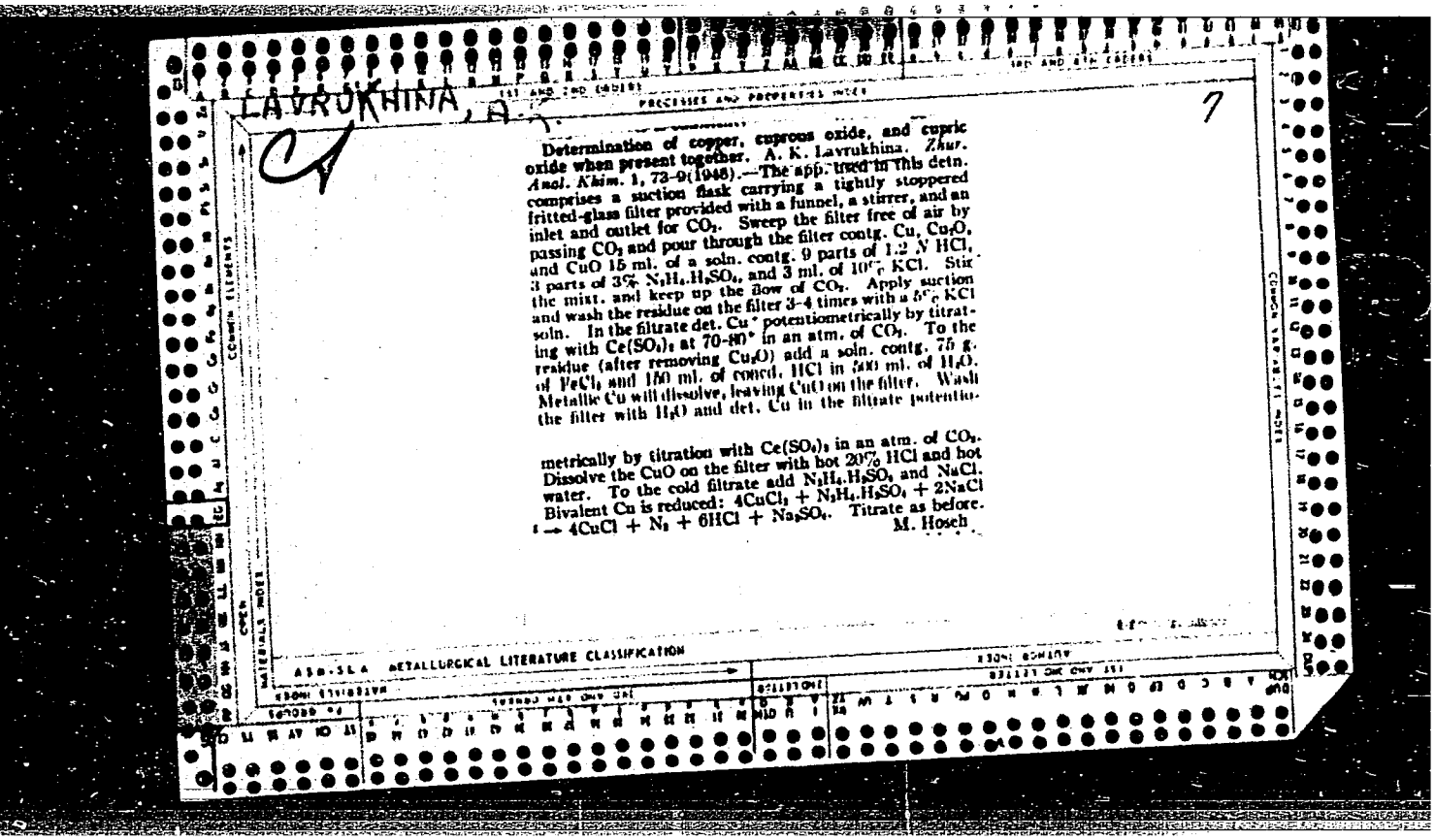
SINYUGIN, V.M., gornyy inzh.; LAVRUKHIN, V.N., gornyy inzh.

Efficiency of using cutter-loaders in longwalls with a record load. Ugol' Ukr. 10 no. 1:11-14 Ja '66. (MIRA 18:12)

TYULENEV, I.V., general armii; YAKOVLEV, N.P., polkovnik; SOKOLOV, N.A., polkovnik; BESHKAREV, N.A., podpolkovnik; LAVRUKHIN, V.S., podpolkovnik; FEDYAYEV, P.V., podpolkovnik; GULEVICH, I.D., podpolkovnik, red.; STREL'NIKOVA, M.A., tekhn.red.

[Practical manual of preconscription training] Metodicheskoe posobie po dopriszyvnoi podgotovke. Moskva, Voen.izd-vo M-va obor. SSSR, 1959. 188 p. (MIRA 12:5)

1. Russia (1923- U.S.S.R.) Ministerstvo oborony. (Military education)



LAVRUKHINA, A. K.

Determination of copper, cuprous oxide, and cupric oxide when present together. A. K. Lavrukhina. *Zhur. Anal. Khim.* 1, 73–9(1948).—The app. used in this detn. comprises a suction flask carrying a tightly stoppered fritted-glass filter provided with a funnel, a stirrer, and an inlet and outlet for CO_2. Sweep the filter free of air by passing CO_2 and pour through the filter contg. Cu, Cu_2O, and CuO 15 ml. of a soln. contg. 9 parts of 1.2 *N* HCl, 3 parts of 3% $N_2H_4.H_2SO_4$, and 3 ml. of 10% KCl. Stir the mixt. and keep up the flow of CO_2. Apply suction and wash the residue on the filter 3–4 times with a 5% KCl soln. In the filtrate det. Cu^+ potentiometrically by titrating with $Ce(SO_4)_2$ at 70–80° in an atm. of CO_2. To the residue (after removing Cu_2O) add a soln. contg. 75 g. of $FeCl_3$ and 150 ml. of concd. HCl in 500 ml. of H_2O. Metallic Cu will dissolve, leaving CuO on the filter. Wash the filter with H_2O and det. Cu in the filtrate potentiometrically by titration with $Ce(SO_4)_2$ in an atm. of CO_2. Dissolve the CuO on the filter with hot 20% HCl and hot water. To the cold filtrate add $N_2H_4.H_2SO_4$ and NaCl. Bivalent Cu is reduced: $4CuCl_2 + N_2H_4.H_2SO_4 + 2NaCl \rightarrow 4CuCl + N_2 + 6HCl + Na_2SO_4$. Titrate as before.

M. Hosch

A50-3L A METALLURGICAL LITERATURE CLASSIFICATION

"Methods for Determining a Metal and Its Oxides of Various Valences in the Case of Their Simultaneous Presence (Copper, Iron, Manganese)." Thesis for degree of Cand. Chemical Science. Sub. 29 June 49, Inst. of General and Inorganic Chemistry imeni N. S. Kurnakov, Acad. Sci. USSR

Summary 82, 18 Dec. 52, Dissertations Presented for Degrees In Science and Engineering in Moscow in 1949. From Vedhernyaya Moskva, Jan-Dec. 1949

CA LAVRUKHINA, A.K.

7

Determination of manganese oxides of various valencies when present together. A. K. Lavrukhina. *Zhur. Anal. Khim.* 4, 40–5(1949).—The purpose of this investigation was the detn. of MnO, Mn_2O_3, and MnO_2 when present together. Place a weighed sample in a 150-ml. Erlenmeyer flask, add 20 ml. of 6 *N* $(NH_4)_2SO_4$ soln., heat on a water bath for 20–25 min. with repeated stirring, filter through a Gooch filter, and wash several times with H_2O. Det. Mn^{++} from MnO in the filtrate by the persulfate method. Treat the filter for 1 hr. at 70–75° with 15 ml. dil. soln. contg. 15 g. of HPO_3 in 100 ml. of concd. H_2SO_4 to dissolve Mn_2O_3. Wash the filter several times with small vols. of 25% H_2SO_4. Det. Mn^{+++} in the filtrate potentiometrically by titrating with 0.1 *N* $(NH_4)_2Fe(SO_4)_2$. Place a weighed sample in a known vol. of standard $Na_2C_2O_4$ soln., add 10 ml. of 25% H_2SO_4. Keep at 70° until dissolved, filter, wash with hot H_2O, and titrate the excess $Na_2C_2O_4$ with 0.1 *N* $KMnO_4$ to det. MnO_2.

M. Hoseh